

## **Comments from the United States on ECE/TRANS/WP.29/GRSP/2013/25**

1. The cited document proposes to amend the UN Global Technical Regulation No. 9 on pedestrian safety by introducing the flexible pedestrian legform impactor (FlexPLI) as a single harmonized test tool in order to enhance the level of protection for pedestrian lower legs. The FlexPLI is replacing the European Enhanced Vehicle Safety Committee (EEVC) lower legform impactor due to its superior biofidelity at the component and assembly level.
2. The new changes introduced by this amendment are the following:
  - a. The introduction of the flexible pedestrian legform impactor.
  - b. The introduction of new dynamic certification corridors.
  - c. The introduction of new static certification corridors.
  - d. The process of using an assessment interval for identifying maximum measurements.
3. Paragraph 200 of Part A, statement of technical rationale, states that two different approaches to derive injury threshold values were used in this proposal. One proposed by Germany and another one proposed by Japan. A brief explanation of the assumptions made by both approaches is included in the following paragraphs. Although Germany and Japan have tried to a great extent to address NHTSA's questions and concerns on each methodology utilized to derive injury risk functions and threshold values, NHTSA remains unconvinced that the proposed thresholds will meet the needs for injury mitigation in the U.S. For this reason, we requested to add a reference, within Part A of this proposal, to a document that explains both approaches in detail. This document should include all injury risk functions and assumptions made.
4. Paragraph 5.1.1 of Part B, presents the injury assessment reference values (IARVs) for this GTR. The US cannot agree with these values until our cost benefit analysis is completed. We previously suggested including the injury risk curves only, with Contracting Parties choosing appropriate IARVs when implementing this GTR in national legislation.
5. We recognize that the IWG added language to Part A to address our concerns and IARVs are currently in square brackets - for further discussion. However, the US cannot adopt

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this amendment unless Contracting Parties are allowed to choose IARVs that are cost beneficial to their domestic fleet or the IARVs are kept in between brackets.

6. To resolve NHTSA's concerns, the German delegation proposed during the December 2013 IWG session to adopt the existing IARV's in Paragraph 5.1.1 of Part B, but to also limit applicability of IARV values to only those contracting parties with existing pedestrian protection regulations. The German proposal would add a footnote to Paragraph 5.1.1 of Part B as follows:
  - a. A Contracting Party without pre-existing pedestrian protection regulations or standards implemented in domestic legislation at the time the Phase 2 of Global Technical Regulation No. 9 is established in the Global Registry, may decide other injury thresholds for the maximum dynamic medial collateral ligament elongation, the maximum dynamic anterior cruciate ligament and posterior cruciate ligament elongation and the dynamic tibia bending moments in ist domestic legislation if it decides such modification is appropriate.
7. During the December 2013 IWG session, it was agreed to seek the endorsement of AC.3 on the German proposal to address concern that the proposal would create regional requirements for pedestrian safety rather than promote harmonization globally. During the March 2014 session of AC.3, it was requested that the GRSP consider the alternate proposals further during this May 2014 session.
8. To resolve NHTSA's concerns about the IARVs, the U.S. proposes that Part A (Preamble) be amended to include recommended IARVs, and that contracting parties may be permitted to choose appropriate values based on their cost and benefit study and the existing injury risk curves.